

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application: Drogou et al.	)	Group Art Unit: 1714
	)	
Serial No. 10/786,185	)	Examiner: Peter A. Szekely
	)	
Filed: February 25, 2004	)	Atty. Docket No. 2092.PKG
	)	

For: HOT MELT ADHESIVE COMPOSITION

**BRIEF ON APPEAL**

Commissioner for Patents  
Alexandria, VA 22313-1450

Sir:

Applicants hereby appeal the decision of the Primary Examiner finally rejecting claims 1-3, 5-9 and 11-13.

A copy of the claims involved in this appeal is set forth in the *Claims appendix*.

*(i) Real party in interest*

The real party in interest is National Starch and Chemical Investment Holding Corporation.

*(ii) Related appeals and interferences*

There are no appeals or interferences known to applicants which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

*(iii) Status of Claims*

Claims 1-3, 5-9 and 11-13 are pending.

Claim 5 has been objected to, but has been indicated as being allowable if placed in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4 and 10 have been canceled.

Claims 1-3, 6-9 and 11-13 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Halloran et al. (U.S. Patent No. 6,239,208), Haner et al. (U.S. Patent No. 6,593,407) or Haner et al. (U.S. publication No. 2002/0146526).

The rejections of claims 1-3, 6-9 and 11-13 are being appealed.

*(iv) Status of Amendments*

No amendment after final rejection was made.

*(v) Summary of claimed subject matter*

The claimed invention is directed to a hot melt adhesive that is formulated for application to a substrate surface at a temperature of less than about 110°C (page 2, lines 1-2 of paragraph [0007]). The claimed adhesive formulation contains ethylene n-butyl acrylate as the only ethylene copolymer present in said adhesive, a paraffin wax, a rosin derived tackifier and an aromatic tackifier (page 2, lines 5-7 of paragraph [0007] and page 3, lines 9-10 2 of paragraph [0016]).

(vi) *Grounds of rejection to be reviewed on appeal*

- A. WHETHER THE SUBJECT MATTER OF CLAIMS 1-3, 6-9 AND 11-13 IS UNPATENTABLY OBVIOUS OVER HALLORAN ET AL. (U.S. PATENT NO. 6,239,208).
- B. WHETHER THE SUBJECT MATTER OF CLAIMS 1-3, 6-9 AND 11-13 IS UNPATENTABLY OBVIOUS OVER HANER ET AL. (U.S. PATENT NO. 6,593,407) OR HANER ET AL. (U.S. PUBLICATION NO. 2002/0146526).
- B1 WHETHER THE NONSTATUTORY OBVIOUSNESS-TYPE REJECTION OF CLAIMS 1-3, 6-9 AND 11-13 OVER OR HANER ET AL. (U.S. PATENT NO. 6,593,407) IS PROPER.

(vii) *Argument*

- A. Claims 1-3, 6-9 and 11-13 are patentable over Halloran et al. (U.S. Patent No. 6,239,208).

Claims 1-3, 6-9 and 11-13 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Halloran et al. (U.S. Patent No. 6,239,208).

Halloran is cited as disclosing ethylene copolymer in claim 1, paraffin wax in claim 2, tackifiers in claim 3, ethylene n-butyl acrylate copolymer in claim 4 and a blend of rosin derived tackifier and aromatic tackifier in the paragraph bridging cols. 7 and 8. It is the examiner's position that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to select applicants' ingredients from a list of equivalents.

Applicants disagree.

The composition of Halloran is a flame retardant hot melt adhesive comprising at least one ethylene copolymer, a hydrated inorganic compound, at least one wax component and, optionally, a tackifying resin. The disclosure at col. 4, discusses the types of ethylene

copolymers useful in the practice of the invention. This disclosure teaches the importance of the copolymer content and as teaching that preferred are ethylene vinyl acetate copolymer having a vinyl acetate content of about 28% and a MI of about 400 g/10min., and a blend of ethylene vinyl acetate copolymers having a vinyl acetate content of 28% and a MIs of 800 g/10min. and 2500 g/10min. (see, col. 4, line 66 to col. 5 line 5). There is no disclosure or suggestion of a hot melt adhesive formulated for low temperature application (below less than about 110°C) that contain ethylene n-butyl acrylate as the only ethylene copolymer present in said adhesive, a paraffin wax, a rosin derived tackifier and an aromatic tackifier.

The examiner's position that the claiming of ethylene n-butyl acrylate in a Markush group is equivalent to claiming it individually is without merit (see Advisory action, September 17, 2007). The claims of Halloran, even if read in isolation of the entirety of the Halloran disclosure, fails to suggest applicants' claimed hot melt adhesive that contains ethylene n-butyl acrylate as the only ethylene copolymer and can be applied at low application temperatures (temperatures of less than about 110°C).

The claimed invention is not obvious over Halloran.

Reversal of the rejection of claims 1-3, 6-9 and 11-13 as being obvious over Halloran is requested.

B. Claims 1-3, 6-9 and 11-13 are patentable over Haner et al. (U.S. Patent No. 6,593,407) and Haner et al. 2002/0146526.

Claims 1-3, 6-9 and 11-13 stand finally rejected under 35 U.S.C. § 103 (a) as being

unpatentable over Haner et al. (U.S. Patent No. 6,593,407). Claims 1-3, 6-9 and 11-13 also stand finally rejected under 35 U.S.C. § 103 (a) as being unpatentable over Haner et al. 2002/0146526.

Claims 1-3, 6-9 and 11-13

Haner ('407) is cited as teaching the blend of rosin esters and terpene phenolics in column 4, lines 1-54 and ethylene n-butyl acrylate copolymer by itself in claims 6-7. Haner ('407) is cited as disclosing hot melt adhesives, modified rosin (claim 1), wax (claim 3), ethylene copolymer (claim 5), ethylene n-butyl acrylate (claims 6 and 7), paraffin wax (claim 10), ethylene vinyl acetate (claim 12), processes and methods (claim 15 and 16) and blends of rosin and terpene tackifier (col. 1, lines 47-55, col. 2, lines 41-48 and col. 4, lines 52-54). The published Haner '526 application is cited as being similar to the Haner '407 patent, but additionally discloses packaged articles using the hot melt adhesive. The Examiner urges that it would have been obvious to one skilled in the art, at the time the invention was made, to select applicants' ingredients from a list of equivalents.

Applicants disagree.

Applicants note that the disclosure of the Haner '526 publication is identical to the Haner '407 patent disclosure and represents the publication of the application that issued as the Haner '407 patent. This is clear from the face of this patent. The originally filed claims 15-19, as set forth in the patent publication being withdrawn due to a restriction requirement and then subsequently canceled.

Haner '407 discloses hot melt adhesives that contain ethylene n-butyl acrylate and preferably also at least one additional ethylene copolymer such as in particular ethylene vinyl

acetate, and requires use of a modified rosin and/or modified terpene which as a molecular weight to softening point ratio of less than about 10 (col. 1, lines 38-45). Haner fails to disclose a hot melt adhesive which comprises ethylene n-butyl acrylate, a paraffin wax, a rosin derived tackifier and an aromatic tackier. The claim 6 disclosures that the Haner formulations contain an ethylene n-butyl acrylate copolymer (see Advisory action, September 17, 2007), fails to suggest a low application hot melt adhesive that comprises ethylene n-butyl acrylate as the only ethylene copolymer, a paraffin wax, a rosin derived tackifier and an aromatic tackier.

Applicants claimed formulations would not have been obvious to the skilled artisan from either of the cited Haner '407 or '526 disclosures.

Reversal of the rejection of claims 1-3, 6-9 and 11-13 as being obvious over Haner '407 or Haner '526 is requested.

B1. Claims 1-3, 6-9 and 11-13 are patentable over Haner et al. (U.S. Patent No. 6,593,407) and as such, the nonstatutory double patenting rejection of claims 1-3, 6-9 and 11-13 must be improper.

Claims 1-3, 6-9 and 11-13 are rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-16 of Haner *et al.* (U.S. Patent No. 6,593,407). For the reasons set forth above, applicants submit that the claimed invention is not obvious over Haner and as such this rejection likewise cannot be maintained.

Reversal of the obviousness-type double patenting rejection is requested.

Respectfully submitted,

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(viii) *Claims appendix*

1. A hot melt adhesive that can be applied to a substrate at a temperature of less than about 110°C, said adhesive comprising  
ethylene n-butyl acrylate as the only ethylene copolymer present in said adhesive,  
a paraffin wax,  
a rosin derived tackifier and  
an aromatic tackifier.
2. The adhesive of claim 1 that can be applied to a substrate at a temperature of from about 80°C to a temperature of about 100°C.
3. The adhesive of claim 2 that can be applied to a substrate at a temperature of from about 80°C to a temperature of about 90°C.
5. The adhesive of claim 1 comprising from about 20 to about 40 wt % of said ethylene n-butyl acrylate, from about 20 to about 40 wt % of said wax, from about 5 to about 30 wt % of an aromatic tackifier, and from about 2 to about 40 wt % a rosin tackifier .
6. An article of manufacture comprising the adhesive of claim 1.



7. The article of claim 6 which is a carton or carton, case, tray or bag.
8. A method of sealing and/or forming a case, carton, tray or bag comprising applying the hot melt adhesive of claim 1 to seal and/or form the case, carton, tray, or bag.
9. A packaged article contained within a carton, case, tray or bag, wherein the carton, case, tray or bag comprises the adhesive of claim 1.
11. The packaged article of claim 9 which is a packaged frozen food article.
12. A process for bonding a substrate to a similar or dissimilar substrate comprising applying to at least one substrate a molten hot melt adhesive composition and bonding said substrate together, said hot melt adhesive comprising the adhesive of claim 1, wherein the adhesive is applied at a temperature of less than about 100 °C
13. The process of claim 12 wherein the adhesive is applied at a temperature of about 80°C to about 90°C.

(ix) *Evidence appendix*

NONE

(x) *Related proceedings appendix*

None